

**A SUMMARY OF THE RESOURCES AND  
ROLES DEDICATED TO THE ERADICATION  
OF BOVINE TUBERCULOSIS IN MICHIGAN**

**by**

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## INTRODUCTION

The presence of bovine tuberculosis (TB) in Michigan livestock is not a new problem. Bovine TB was frequently found in Michigan dairy and beef cattle, and in many other states, through the mid-20th century. In fact, Michigan was not declared free of bovine TB in cattle and bison until 1979. The presence of the disease in wild deer, however, is extremely rare, not only in Michigan but nationally. It is believed that prior to 1994, only eight wild white-tailed or mule deer had been reported with bovine TB in North America. Michigan is thought to be the only place on the continent where the disease has become established in the wild deer population. The presence of bovine TB in the Michigan deer population poses potential risks to the viability of Michigan's livestock economy, public health, wildlife health, and wildlife-related recreation and tourism. Although the transmission of the disease to humans is very remote today because of milk pasteurization, transmission of the disease from the wild deer herd to livestock represents a serious concern to Michigan's agriculture industry for both national and international trade.

This report describes the economic and State fiscal impacts of bovine TB in Michigan, including the State and Federal resources that have been made available to eradicate the disease. The report provides a brief history of the disease in Michigan and discusses the roles and responsibilities of various State agencies in the eradication of the disease. Public Act 232 of 2000 made a number of changes to the Animal Industry Act of 1987 related to bovine TB, primarily to reflect the change to Michigan's TB-free status and Federal regulations. This report also provides an estimate of the fiscal impact associated with the legislation, including statewide whole herd testing costs, a producer assistance program, cost share programs, and indemnification payments.

## THE DISEASE

Tuberculosis is a contagious disease of both animals and humans and can be caused by three specific types of the *Mycobacterium* bacteria. Bovine TB, caused by *Mycobacterium bovis*, primarily affects cattle and other bovine-like animals (e.g., bison and goats) but can be transmitted to humans and other animals. No other strain of TB has as great a host range as bovine TB does.<sup>1</sup>

Bovine TB has affected both animal and human health for years. During the early part of the 20<sup>th</sup> century the disease affected more U.S. farm animals than did all other infectious diseases combined. The United States Department of Agriculture (USDA) Cooperative State-Federal Tuberculosis Eradication Program, which began in 1917, is chiefly responsible for the near-eradication of the disease from the nation's livestock population. Under the previous USDA rules governing state bovine TB status, at the end of fiscal year (FY) 1998-99, 45 states were in "Accredited Free" status and four states were in "Modified Accredited" status. Michigan was in "Accredited Free-Suspended" status because of the discovery of two infected beef herds.<sup>2</sup>

Typically found in cattle, bovine TB is spread through contact with infected animals when bacteria from nasal or oral secretions are inhaled by another animal. Transmission of the disease

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<sup>1</sup> U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Bovine Tuberculosis Fact Sheet, September 1995.

<sup>2</sup> Ibid.

from wild deer to livestock can occur at common feeding locations. The bacteria usually lodge in the lungs and then may be coughed up and swallowed. Advanced stages of the disease cause lesions on lung tissue and may spread to other organs.

The threat to humans in the United States of contracting bovine TB today is extremely remote. Human cases of bovine TB have been greatly reduced as a result of the USDA eradication program, advances in sanitation and hygiene, and milk pasteurization. Pasteurization of milk was originally implemented in the United States specifically to kill the bovine TB bacterium and other disease-causing organisms.

Through 1999, TB-infected deer were thought to occur only in the northeastern section of the Lower Peninsula. This section of Michigan is characterized by a dense deer population and a history of large-scale feeding that brings deer into unnatural face-to-face contact that promotes sharing of saliva and disease transmission. As part of the 1999 deer harvest, however, bovine TB was discovered in one wild deer each from Antrim, Osceola, and Mecosta Counties. The presence of the disease in these other counties suggests to scientists that the disease is not limited to northeastern lower Michigan, but has existed in the deer herd at a very low prevalence for some time.

Under the new USDA rules governing state bovine TB status, Michigan's status was changed to "Modified Accredited" to reflect the presence of the disease in livestock. In order to regain its "Accredited Free" status, the State must have 0% TB prevalence in cattle, bison, and goat herds and no TB in the past three years from the time the last infected herd was depopulated or from the time of surveillance indicating no risk of TB spreading.<sup>3</sup> The new USDA rules allow "zoned" status for the purpose of state bovine TB classification. Assuming certain conditions are met, states may request that the USDA designate part of a state as having a different tuberculosis classification than the rest of the state has. Michigan intends to request the "Accredited Free" classification for the Upper Peninsula following whole herd testing there and the 2000 wildlife survey that shows no TB in livestock or wildlife, and based on the assumption that infected white-tail deer are unlikely to move from the Lower to the Upper Peninsula because of the natural barrier formed by the Great Lakes and the Mackinac Straits. Prior to promulgation of the new USDA rule allowing zoned status, the USDA issued an interim rule granting Michigan zoned status in order to recognize northeastern lower Michigan as unique from the rest of the State. Under the current classification system, however, all of the State is "Modified Accredited".

## **ECONOMIC IMPACTS**

The presence of bovine TB in the wild deer herd has potentially serious economic implications for Michigan agriculture. A state's TB-free status is vital to its livestock industry as many others states base their importation testing requirements on the status of the state of origin. Supplemental testing requirements pose additional costs to livestock producers and may result in lost production. In addition, a state's TB-free status can have an impact on the level of interstate and international trade, as other states and countries prefer livestock products from an accredited TB-free state.

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<sup>3</sup> 9 CFR Part 77, Tuberculosis in Cattle, Bison, and Captive Cervids, United States Department of Agriculture, Animal and Plant Health Inspection Service, effective November 22, 2000.

Agriculture plays an important role in the Michigan economy, extending beyond the farm gate to value-added processing and exports. Total agriculture output was \$4.0 billion in 1999, generating a net farm income of \$659 million. Michigan cattle, both dairy and beef, are key components of the Michigan farm economy. There are a little over 1 million cows in Michigan. Michigan ranked ninth nationally in milk production in 1999. That year, 300,000 dairy cows produced 5.5 million pounds of milk, resulting in \$807 million in gross receipts for the dairy industry. The beef cow portion of the cattle industry, while smaller than the dairy portion, produced \$236 million in gross receipts in 1999.<sup>4</sup> Bovine TB also threatens other aspects of the Michigan economy, including recreation and property values; however, the majority of the economic consequences of bovine TB will be felt by Michigan agriculture.

In 1997, a group of Michigan State University researchers conducted an economic analysis to estimate the costs to Michigan of losing its TB "Accredited-Free" status.<sup>5</sup> The study concluded that the costs to the agriculture industry in this State would be significant. Specifically, the study estimated that the potential loss to the Michigan economy from bovine TB's impact on the agriculture industry would be approximately \$52 million for 1999 - 2003 and \$156 million for 1999 - 2008, based on the assumption that Michigan would lose its TB-free status in 1999. Another impact on the agriculture industry that was not quantified in the study included reduced interstate sales in the captive cervid industry. The study further concluded that growers of deer feed also would be affected by a ban or limit on feeding and/or baiting; however, estimates of such impacts were not included in the study.

More recently, another research team from Michigan State University updated the 1997 study specifically to examine the total economic costs of bovine TB to the Michigan livestock industry. The report examined testing costs, lost production, and price effects associated with bovine TB, assuming that Michigan would lose its TB-free status (which has since happened). The total economic costs to the Michigan cattle industry would amount to \$21.1 million in FY 2000-01 and decrease to \$17.0 million in FY 2009-10. The report concluded that TB has not had a discernable impact on the differential between Michigan live cattle prices and future prices.<sup>6</sup>

## **STATE ROLES AND RESOURCES IN THE ERADICATION OF BOVINE TB**

Reacting to a 1997 report from the State Committee on Bovine Tuberculosis in Wild Deer, Governor John Engler issued Executive Directive 1998-1 to direct the Departments of Agriculture, Community Health, and Natural Resources to work collaboratively to develop plans for eradicating bovine TB in wild deer.<sup>7</sup> The directive also established a bovine TB eradication

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<sup>4</sup> Michigan Agricultural Statistics 1999-2000, Michigan Agricultural Statistics Service, August 2000.

<sup>5</sup> Larry Leefers, John Ferris, and Dennis Propst, Economic Consequences Associated with Bovine Tuberculosis in Northeastern Michigan, Michigan State University, September 1997 (Revised-February 1998).

<sup>6</sup> Christopher Wolf and John Ferris, Economic Consequences of Bovine Tuberculosis for Michigan Livestock Agriculture, Michigan State University, December 2000.

<sup>7</sup> Recommendations for Elimination of Bovine Tuberculosis in Free-Ranging White-Tailed Deer in Michigan, State Committee on Bovine Tuberculosis in Wild Deer, September 1997.

coordinator position within the Department of Community Health to work with all agencies in implementing an eradication strategy. Since issuing the Executive Directive in January 1998, Governor Engler has requested substantial financial resources to assist the Departments in their efforts to combat bovine TB.

Table 1 lists State appropriations for bovine TB activities. To date, over \$37.0 million has been committed to eradication efforts. Most recently, Public Act (PA) 291 of 2000 contained a total of \$19.7 million in General Fund/General Purpose (GF/GP) funding for the activities of the Departments of Agriculture, Community Health, and Natural Resources. The funding allocated in PA 291 is intended to cover the three-year period, FY 2000-01 through FY 2002-03.

In addition to the resources provided directly for bovine TB, the Legislature has approved funding for a new animal health diagnostic laboratory at Michigan State University (MSU) to address, in part, the bovine TB problem. Public Act 265 of 1999 provided the Michigan Department of Agriculture (MDA) with \$340,000 to begin planning the new facility in cooperation with the Michigan Department of Natural Resources and MSU. Under PA 291 of 2000, the Legislature authorized \$45.0 million for the construction of a 128,700 square foot laboratory at MSU. Public Act 506 of 2000 increased the total authorization for this project to \$58.0 million.

Table 1

State Appropriations for Bovine TB Activities FY 1997-98 to present			
<b>Department of Agriculture</b>			
1997-98	PA 103 of 1997	\$225,000	Restricted
1997-98	PA 273 of 1998	500,000	Restricted
1997-98	PA 273 of 1998 - indemnification payments	250,000	GF/GP
1997-98	legislative transfer	300,000	GF/GP
1998-99	PA 69 of 1999 - multiyear	9,637,000	GF/GP
1999-2000	PA 291 of 2000 - multiyear	14,500,000	GF/GP
2000-01	PA 270 of 2000 - operating	3,488,900	GF/GP
<b>Subtotal: Agriculture</b>		<b>\$28,900,900</b>	

Table 1(continued)

<b>State Appropriations for Bovine TB Activities FY 1997-98 to present</b>			
<b>Department of Community Health</b>			
1997-98	PA 336 of 1998	500,000	Restricted
1999-2000	PA 291 of 2000 - multiyear	749,000	GF/GP
<b>Subtotal: Community Health</b>		<b>\$1,249,000</b>	
<b>Department of Natural Resources</b>			
1997-98	PA 273 of 1998	500,000	Restricted
1998-99	PA 290 of 1998	500,000	Restricted
1999-2000	PA 121 of 1999	500,000	Restricted
1999-2000	PA 291 of 2000 - multiyear	4,500,000	GF/GP
2000-01	PA 267 of 2000	500,000	Restricted
<b>Subtotal: Natural Resources</b>		<b>\$6,500,000</b>	
<b>Michigan Strategic Fund - Travel Michigan</b>			
1999-2000	PA 120 of 1999	200,000	GF/GP
2000-01	PA 292 of 2000	200,000	GF/GP
<b>Subtotal: Michigan Strategic Fund</b>		<b>\$400,000</b>	
<b>TOTAL</b>		<b>\$37,049,900</b>	

Source: Appropriations Bills

#### Michigan Department of Agriculture

Under the authority of the Animal Industry Act (PA 466 of 1988, as amended), the Michigan Department of Agriculture's Animal Industry Division (AID) is responsible for protecting public health and the health of domestic animals, livestock, and pets in the State. The AID's role, as it relates to the bovine TB problem, is to test livestock for the disease, provide coordination with the USDA and other agencies, provide indemnification for animals ordered destroyed, provide outreach to the agricultural community, and issue livestock quarantines, when necessary.

Prior to 1997, the MDA's bovine TB eradication efforts were supported by existing departmental resources. Since 1997, nearly \$29 million in State resources have been appropriated to the Michigan Department of Agriculture specifically to address the bovine TB problem (Table 1). The FY 2000-01 MDA budget (PA 270 of 2000) recognizes the ongoing nature of the TB problem in Michigan as it contains almost \$3.5 million GF/GP and authorization for 29 full-time equated positions. It is anticipated that this funding level will be appropriated each year through FY 2002-03 to cover the costs of the Department's TB eradication program.

The MDA received \$14.5 million under PA 291 of 2000.<sup>8</sup> This funding primarily will be used to meet the requirements of recent changes to the Animal Industry Act contained in Public Act 323 of 2000. These changes require whole herd testing of all cattle, bison, goats, and captive cervid in the State, establish a producer assistance program, create a veterinarian/livestock auction equipment cost share program, and increase the indemnification cap from \$3,000 to \$4,000 per animal. Table 2 contains a spending plan for the Michigan Department of Agriculture's bovine TB efforts through FY 2002-03. This plan is based on the \$14.5 million supplemental appropriation, an annual appropriation of nearly \$3.4 million through FY 2002-03, and the availability of all carryforward funding from previous years as work projects.

Table 2

<b>Michigan Department of Agriculture Bovine TB Activities FY 2000-01 Through FY 2002-03 Spending Plan</b>	
MDA TB Program (\$3.4 million appropriated annually)	\$10,200,000
Statewide Whole Herd Testing	10,400,000
Indemnification Payments	1,000,000
Incidentals (e.g., farm calls)	1,000,000
50/50 Cost Share Programs (as required under PA 232 of 2000)	
Veterinarians (\$3,750 x 75 vets)	281,250
Livestock Auctions (\$7,500 x 20 yards)	150,000
Producer Assistance Program (as required under PA 232 of 2000)	
One-Time (\$3 per head x 155,850)	467,550
Annual (\$3 per head x 443,700)	3,993,300
<b>TOTAL</b>	<b>\$27,492,100</b>

Source: Michigan Department of Agriculture

#### Statewide Whole Herd Testing

Public Act 323 of 2000 implemented the legislative changes necessary for whole herd TB testing in Michigan. The legislation provides the mechanism to determine high-risk TB areas (i.e., areas where TB has been identified in wild deer and in livestock) and requires whole herd testing of all cattle, bison, goats, and privately-owned cervid in these high-risk TB areas annually. Whole herd testing of all other cattle, bison, and goats is required by January 1, 2004. Whole herd testing of certain privately-owned cervids is also required. Privately-owned white-tailed deer and elk farms must have whole herd testing completed by July 27, 2000. Privately-owned white-tailed deer and elk ranches must have whole herd testing completed by January 27, 2004.

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<sup>8</sup> Public Act 291 contained \$14.5 million to the Department of Agriculture; however, a subsequent legislative transfer of \$1,016,540 reduced this appropriation to \$13,483,460.

Using figures from the Michigan Agricultural Statistics 2000 Census, the Michigan Department of Agriculture estimates that 1,487,000 animals will have to be tested for bovine TB before FY 2002-03. Of this total, 156,000 animals, primarily breeding cattle, only will have to be tested once. Approximately 444,000 animals will have to be tested annually through FY 2002-03. Annual testing will be required of dairy herds in the Lower Peninsula and livestock in high-risk areas; therefore, over 1.3 million TB tests will be administered through FY 2002-03.

Public Act 323 did not affect the testing requirements for dairy herds pursuant to the Federal Grade "A" Pasteurized Milk Ordinance (PMO). As a result of the State's losing its TB-free designation from the USDA on June 22, 2000, the PMO requires that all dairy farms (cattle and goat) in Michigan have an annual whole herd TB test within one year of the change in TB status (i.e., by June 22, 2001) to continue marketing milk. Prior to June 22, 2000 only northeastern Michigan dairy herds (i.e., those located in the specific area east of I-75 and north of M-55) were required to have an annual whole herd TB test.<sup>9</sup> Under the MDA testing proposal, dairy herds from the Upper Peninsula will have to be tested only once (prior to June 22, 2001) as it is assumed that the Upper Peninsula will be zoned as TB-Free under the new USDA rules allowing zoned status. If the Upper Peninsula is not zoned TB-Free, all dairies will require annual whole herd testing.

A good portion of the \$14.5 million of supplemental funding will be used to cover the costs of whole herd testing conducted by State, USDA, and/or private veterinarians who are under contract with the State and/or USDA. It is estimated that private veterinarians will perform the vast majority of the TB testing. Private veterinarians are reimbursed \$40 per farm visit and \$8 per head for the TB tests they conduct. The Michigan Department of Agriculture approximates the total cost of the statewide whole herd testing at \$10.4 million through FY 2002-03.

#### Producer Assistance Program

Public Act 323 of 2000 requires the Director of the MDA to provide a producer assistance program approved by the Michigan Commission of Agriculture for whole herd bovine TB testing required under the Animal Industry Act or the Grade "A" Pasteurized Milk Ordinance. On December 7, 2000, the Michigan Commission of Agriculture approved an assistance program that will provide \$3 per head to livestock owners for animals tested as part of a whole herd test, retroactive to January 1, 2000. The Department of Agriculture assumes one-time testing of nearly 156,000 animals and annual testing of some 444,000 animals. The total estimated cost of assistance payments through FY 2002-03 is nearly \$4.5 million. By far the largest component of such a program will be the assistance payments made to dairy farmers who are required to have their animals tested annually.

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<sup>9</sup> The TB status of northeastern Michigan was reduced to "Nonmodified Accredited" on October 20, 1999, to reflect the discovery of the disease in three livestock operations.

### Cost Share Programs

Public Act 323 of 2000 also established two cost share programs for certain equipment needed by veterinarians and livestock auctions for bovine TB testing, retroactive to January 1, 2000. The legislation requires the Director of the MDA to pay veterinarians, on a 50/50 cost share basis approved by the Michigan Commission of Agriculture, for chutes and gates used for testing. The Commission approved a cost share of up to \$3,750 per veterinarian. The MDA estimates that 75 veterinarians will be eligible for the cost share at a total cost of \$281,250.

The legislation also provides a 50/50 cost share program, approved by the Michigan Commission of Agriculture, for owners/operators of livestock auctions for the costs of chutes, gates, and facilities remodeling associated with bovine TB surveillance and eradication. The Commission approved a cost share of up to \$7,500 per livestock sale yard for a total estimated cost of \$150,000.

### Indemnification Payments

Under the authority of the Animal Industry Act, the Director of the Michigan Department of Agriculture may order the slaughter, destruction, or other disposition of livestock to eradicate a disease such as bovine TB. Furthermore, the Director may indemnify livestock owners for those animals ordered destroyed. Generally speaking, indemnification payments are limited to 100% of the fair market value of the animal, not to exceed \$4,000. The calculation of all State indemnification payments occurs after deduction for any compensation received from other sources, including the Federal government, insurance, or salvage value.

The Legislature has modified the indemnification process and has raised the indemnification cap twice since 1998 to address the bovine TB problem in Michigan. Public Act 552 of 1998 changed how the value of animals is determined for the purpose of indemnification payments from 75% of fair market value as if the animal were grade status, to 90% of the fair market value. These changes were retroactive to January 1, 1998. The legislation also changed the cap from \$1,250 per animal to \$3,000 per animal. The legislation included a sunset of January 1, 2005, for the new indemnification payment process and cap.

Public Act 323 of 2000 again modified the indemnification process and raised the cap. This legislation increased how individual animals are valued from 90% of fair market value to the present 100% of fair market value and changed the cap from \$3,000 per animal to \$4,000 per animal. Under PA 323, indemnification payments for an entire herd are based on 100% of fair market value of that type of animal, not to exceed *an average* of \$4,000 per animal. Therefore, under a whole herd indemnification, it is possible that a single animal could be valued in excess of \$4,000 and result in a full indemnification payment. This legislation also included domestic animals as eligible for indemnification and eliminated the sunset clause.

Currently, the USDA indemnifies livestock owners for animals destroyed due to bovine TB based on the disease status of the animal. The payment is a fixed amount, regardless of the market value of the animals. The USDA indemnifies owners \$450 per animal if it is classified as a "suspect" and \$750 per animal if it is classified as a "reactor". A proposed rule currently before the USDA contemplates a change in indemnification payments from a fixed amount per animal to 100% of fair market value, not to exceed \$3,000. It is unclear at this time when such a change would become effective, although when finalized, the State portion of livestock indemnification payments would decrease substantially.

Since 1993, the MDA has paid animals owners \$582,844 for animals destroyed due to bovine TB and the USDA has paid \$417,000. Approximately 1,520 animals have been destroyed, resulting in State and/or Federal indemnification payments. The MDA's bovine TB spending plan contains \$1.0 million for State indemnification payments through FY 2002-03, although this may change should the USDA modify its indemnification cap. Clearly this cost component of the MDA spending plan involves a degree of uncertainty as it is very difficult to predict the number of animals that will have to be destroyed under a statewide, whole herd testing scenario.

#### Michigan Department of Community Health

The Michigan Department of Community Health's (MDCH's) bovine TB eradication efforts focus primarily on testing for the disease in selected tissues from wild and domestic animals. Most of the testing for the disease is done at the request of the Department of Natural Resources, for surveillance or monitoring of wild animals. The MDCH also provides epidemiological services and support to local health departments for bovine TB control activities in affected counties. Because testing for the disease poses a health risk to laboratory workers, analyses must be performed in specially designed laboratories equipped with biosafety level 3, of which there are very few in the State. The MDCH operates a biosafety level 3 laboratory in Lansing.

The MDCH Bureau of Laboratories has provided testing of tissues for bovine TB since 1994. For the most part, this work was supported by existing Department resources in the absence of dedicated appropriations. Public Act 291 of 2000 contained the first dedicated bovine TB eradication resources, \$749,000 to support the Department's activities over a three-year period. These resources will be used for epidemiological work, laboratory testing, and associated equipment purchases.

#### Michigan Department of Natural Resources

Whereas the Michigan Department of Agriculture has authority over privately owned deer, the Michigan Department of Natural Resources (MDNR) is responsible for disease control in the wild deer population. The MDNR focuses its bovine TB eradication efforts in three areas; population surveys, annual disease testing of deer, and research. Population surveys occur throughout most of the northern half of the Lower Peninsula. Survey methods include pellet and dead deer searches. Surveillance for bovine TB includes collecting and testing deer from all 83 Michigan counties, through either hunter harvest or roadkill. This component includes all aspects of field collection and lab analysis of tissue. The final component of the MDNR's bovine TB activities is research. The agency investigates a variety of questions related to disease transmission, deer movement, and feeding patterns, to cite a few.

#### Michigan Strategic Fund

The Travel Michigan Office of the Michigan Strategic Fund works collaboratively with convention and visitor bureaus and other destination marketing organizations to market State tourism and to provide information services, resulting in travelers to and within Michigan. Travel Michigan activities related to bovine TB deal with promoting northeastern Michigan as a vacation destination.

## FEDERAL RESOURCES

The Cooperative State-Federal Tuberculosis Eradication Program began in 1917. The Program is administered by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), state animal health agencies, and livestock producers. As its name implies, the goal of the TB eradication program is to eradicate bovine tuberculosis from the United States, as opposed to controlling the disease. The TB program consists of a number of components, including epidemiology, testing, surveillance, depopulation, and indemnity.

Unlike many other joint State-Federal programs, the bovine TB program does not require state matching funds. In general, states provide personnel to trace and test animals suspected of having bovine TB at slaughter, and some states indemnify livestock owners for depopulated animals. Michigan has committed substantial State resources to combating the disease in domestic livestock as well as the wild deer population. The FY 1998-99 USDA appropriation contained over \$4.6 million for bovine TB eradication activities nationally. The majority of this funding is allocated to APHIS area offices across the country on a priority basis for surveillance activities. In addition to resources allotted to the Michigan APHIS office from the annual USDA appropriations, supplemental Federal resources have been earmarked specifically for bovine TB eradication activities in Michigan. Recently, the U.S. Congress made available funding for bovine TB eradication efforts in Michigan from two supplemental sources to secure approximately 20 veterinary teams, consisting of one veterinarian and one assistant each, to assist State and private practitioners with livestock testing and to monitor the disease.

First, in a highly unusual act of the U.S. Congress, \$6.0 million was made available in FY 2000-01 through a nonappropriations bill to the Secretary of the USDA to respond to bovine TB in Michigan. The Michigan congressional delegation was successful in securing the funding as an earmark in the Agricultural Risk Protection Act of 2000 (Public Law 106-224). The funding has been allocated to APHIS for the purposes and in the amounts shown in Table 3. Roughly \$4.3 million will be spent by APHIS directly in Michigan on program operations, the largest component being surveillance activities. It is estimated that a little more than \$1.0 million will be directed to the Michigan Department of Agriculture and Michigan State University for eradication and research activities. It is unknown, at this time, what portion of this latter funding will have to come through the State budget process.

Table 3

<b>Agricultural Risk Protection Act of 2000 Funding for Bovine TB Activities in Michigan</b>	
<b><u>Purpose</u></b>	<b><u>Amount</u></b>
Surveillance Teams	\$2,000,000
Research	1,100,000
Indemnification and Depopulation Payments	680,000
Testing Individuals	200,000
Food Safety and Inspection Service	100,000
Risk Communication and Technology	220,000
Wildlife Services	200,000
Wildlife Testing	600,000
Fencing	400,000
USDA Overhead	500,000
<b>Total</b>	<b>\$6,000,000</b>

Source: USDA, APHIS

The second source of Federal funding was announced on October 16, 2000, when USDA Secretary Dan Glickman declared that the status of bovine TB in the United States constituted an emergency that threatened the livestock industry. Under the Federal authority granted him, Secretary Glickman transferred nearly \$44.2 million in unreserved commodity credit corporation (CCC) funds to expand the bovine TB eradication program. This is an initial payment on what is expected to be a multiyear effort. The majority of the initial funding will be used to address the disease in Texas, where recurring infections of dairy herds near El Paso along the Mexican border threaten the U.S. cattle industry. The funding will be used in Texas primarily for a one-time buyout of dairy herds in El Paso County to eradicate the disease from the state.

It is estimated that approximately \$6.0 million of this funding will be spent, directly or indirectly, on eradication efforts in Michigan. Nearly \$4.58 million of the emergency funds will be made available to the APHIS Veterinary Services office in Michigan. The majority of the Michigan funding available through Secretary Glickman's emergency declaration combined with the funding from the Agricultural Risk Protection Act of 2000 will be used to support disease surveillance and testing in Michigan by APHIS-sponsored veterinary teams.

The majority of the Federal funding available for TB eradication efforts in Michigan will not flow through the State budget process, but will be spent directly by the APHIS Veterinary Services office in Michigan. Any funds earmarked for the MDA or another State agency will have to be appropriated by the Legislature before they can be spent by the State.

## CONCLUSION

The goal of Michigan's bovine TB activities is to eradicate the disease, not contain it. To this end, both the State and Federal governments have committed significant resources. Despite these resources, it is unknown, at this time, how long eradication efforts will have to be carried out. As a direct result of losing its TB-free status, Michigan is conducting statewide testing of all livestock, which will provide a measure of disease prevalence and help toward regaining TB-free status. Wildlife surveillance also is required to determine the rate of disease in the Michigan wild deer herd. It is likely that no state has looked as hard for TB in wild deer. Following statewide testing of livestock, which is scheduled for completion by January 1, 2004, the State will be required to conduct expanded monitoring for the disease before the USDA restores Michigan's TB-free status. Again, it is unknown how long expanded monitoring will be required.

Also unknown is the amount of Federal support that will be made available to Michigan in the years to come to eradicate the disease. Two separate sources of Federal funds were provided to Michigan in 2000, which freed up valuable State resources for new legislatively mandated producer assistance and cost share programs. Similarly, an increase to Federal indemnification levels, which is currently being developed in Washington D.C., would reduce the State's portion of indemnification payments made to Michigan livestock owners.

The uncertainty associated with bovine TB makes budgeting for eradication and surveillance somewhat difficult. At this time, it appears that sufficient State resources have been identified through FY 2002-03; however, needs may change as statewide livestock testing continues and more is learned about the status of bovine TB in Michigan. It is clear that disease monitoring and surveillance will extend for some time beyond FY 2002-03, but at this time the associated resource needs have not been identified.